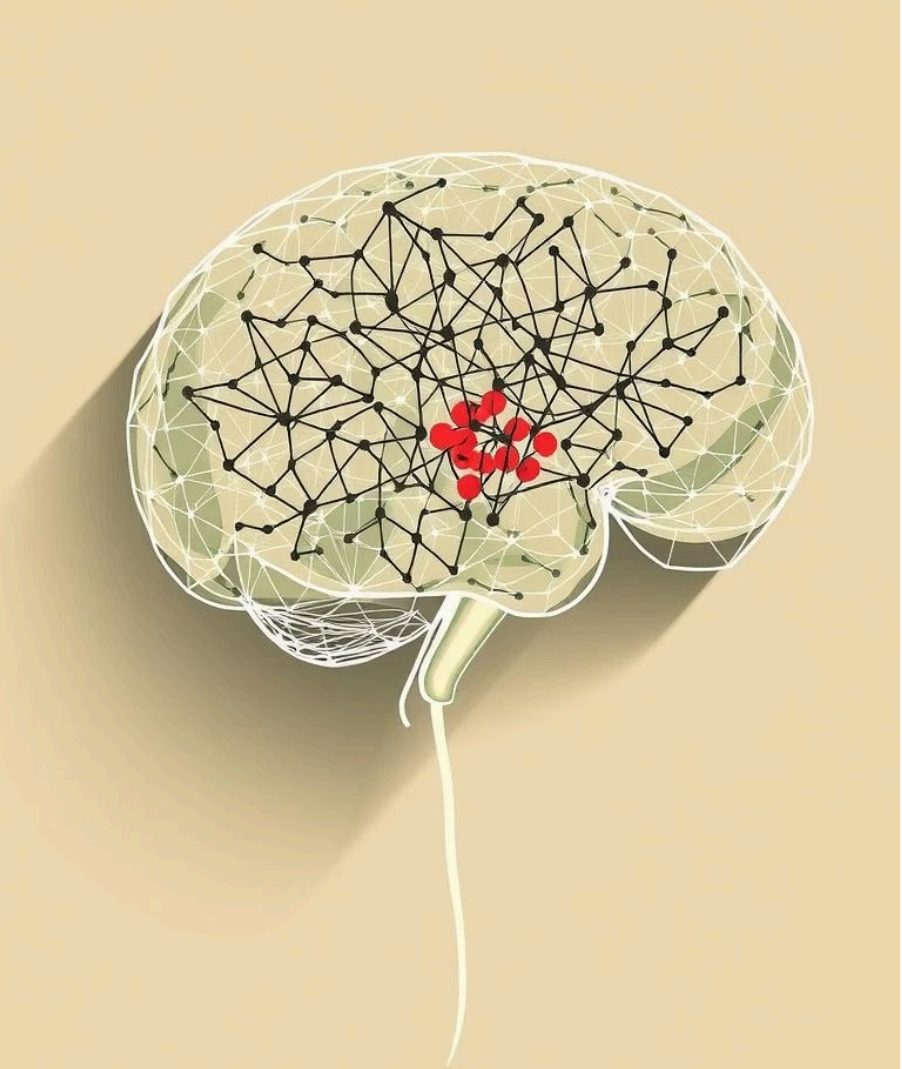


Basic Cognitive Processes Behind Cognitive Biases

Understanding the mental mechanisms that influence how we think.

What Are Cognitive Biases?

Cognitive biases are systematic deviations from rationality. They arise from mental shortcuts our brains use to process information quickly. These heuristics can lead to errors in judgment. Understanding them starts with how our mind processes information.

Mental Shortcuts

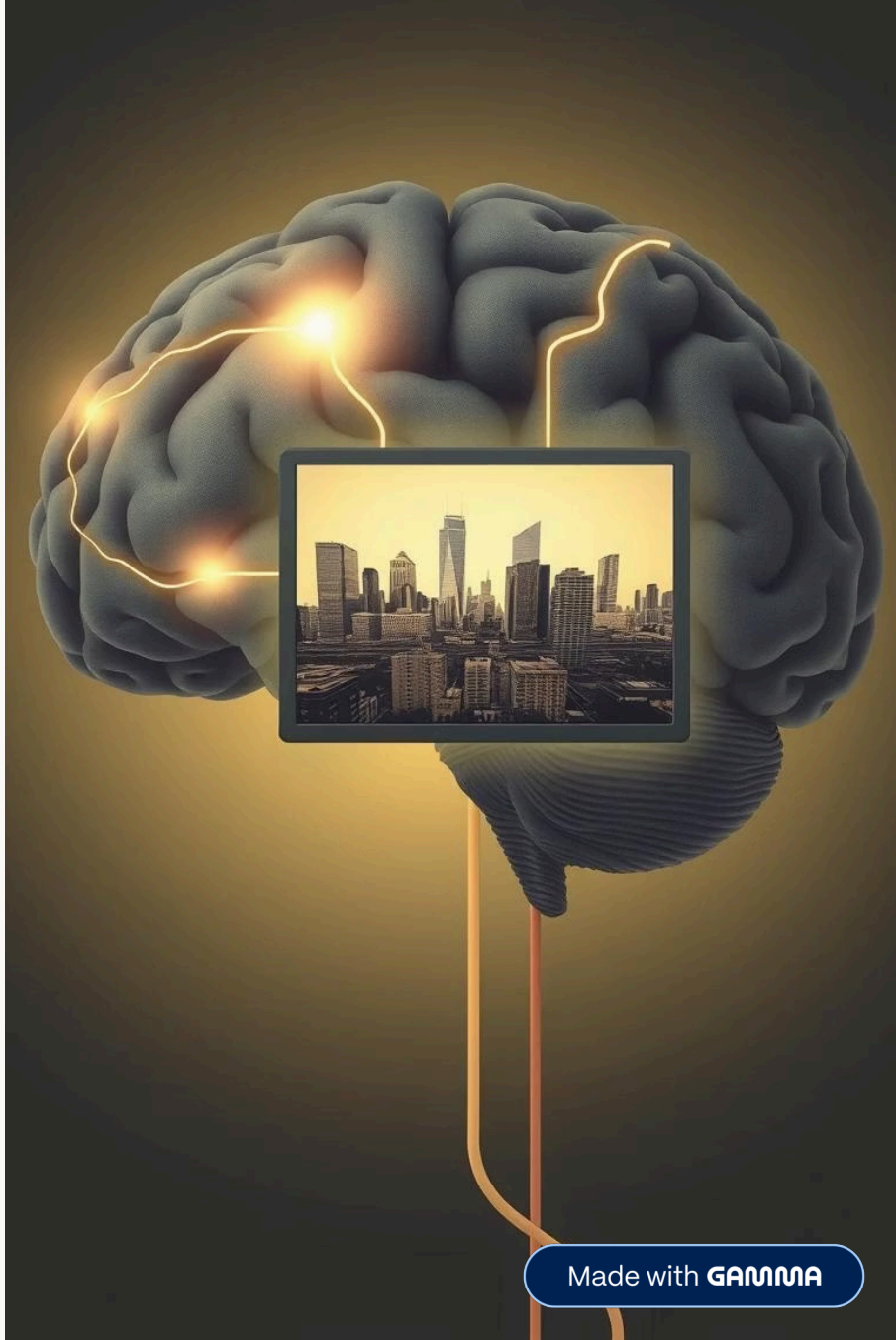
Our brains use heuristics for rapid processing.

Systematic Errors

These shortcuts can lead to consistent deviations.

Judgment Deviations

Biases impact how we make decisions.



Why Study Cognitive Processes?

To understand cognitive biases, we must examine the mental functions that shape our perceptions and judgments. These processes simplify reality, but they can also distort it. Understanding them is crucial for psychology students.

Attention

Focusing on specific information.

Perception

Interpreting sensory data.

Memory

Storing and retrieving information.

Thinking

Reasoning and problem-solving.

Attention and Bias Formation

Attention determines what information we notice and focus on. We cannot process everything, so we filter. Selective attention can lead us to ignore relevant details. Confirmation bias is an example of this filtering.

Information Filter

We process only a fraction of data.

Selective Focus

Ignoring peripheral, but important, details.

Confirmation Bias

Seeking data that supports existing views.

Perception and Reality

Perception shapes how we interpret sensory data. Our brain fills gaps, filters noise, and applies expectations. Top-down processing can cause distorted views. This leads to biases like illusory correlation or stereotyping, altering our reality.

Interpretive Brain

Our brain constructs reality.

- Fills in sensory gaps.
- Filters out distractions.

Top-Down Processing

Expectations influence perception.

- Illusory correlation.
- Stereotyping.

Memory and Mental Shortcuts

Our memories are not perfect; they are selective and reconstructive. We often remember what stands out or confirms our beliefs. Recency and primacy effects impact recall, contributing to biases. Availability bias makes easily recalled events seem more common.

Selective Recall

Memories are not always accurate.

Serial Position Effect

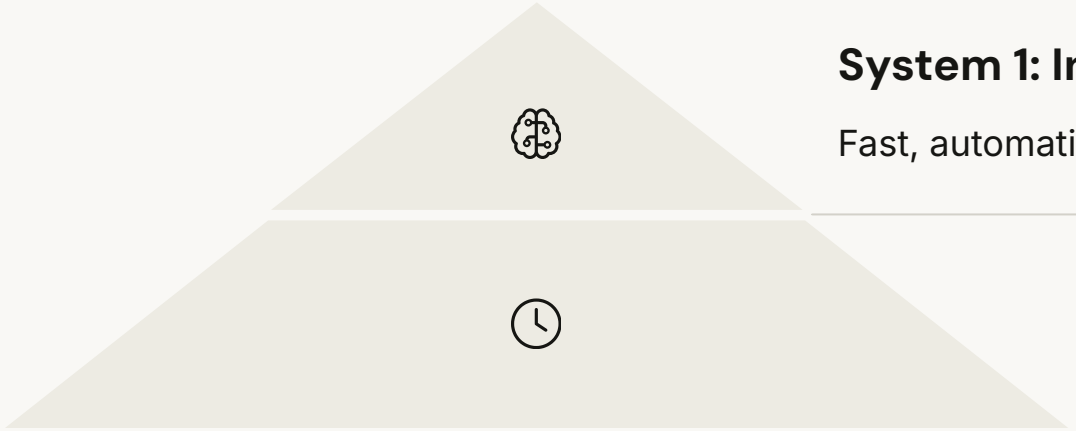
Recency and primacy influence what we remember.

Availability Bias

What is easily recalled seems more prevalent.

Fast and Slow Thinking

Kahneman’s Dual-Process Theory describes two systems of thought. System 1 is fast, automatic, and intuitive, leading to heuristics and biases. System 2 is slow, deliberate, and logical. We typically rely on System 1, which is fast but prone to error. Examples include anchoring bias and framing effects.



System 1: Intuitive

Fast, automatic, and prone to biases.

System 2: Deliberate

Slow, logical, and effortful.